

IN THE CLAIMS:

The following is a complete listing of claims in this application.

Claims 1-18 (canceled).

19. (previously presented) An opalescent glass ceramic which is devoid of ZrO_2 and TiO_2 , and which comprises an Me(II)O component in an amount of less than 4% by weight, and an Me(IV)O_2 component in an amount of 0.5 to 3% by weight, the glass ceramic consisting essentially of:

Component	% by weight
SiO_2	55 - 62
Al_2O_3	13 - 17
B_2O_3	0 - 2
P_2O_5	1.5 - 3
Li_2O	0 - 2
Na_2O	7 - 12
K_2O	8 - 12
MgO	0 - 2
CaO	1 - <4
BaO	0 - 2
Tb_2O_3	0 - 3
Me(IV)O_2	0.5 - 3

wherein said Me(IV)O_2 consists essentially of 0-1% by weight CeO_2 and 0-2.5% by weight SnO_2 , and

wherein the glass ceramic has a thermal expansion coefficient (TEC) in the range of $9.0 - 13.5 \times 10^{-6}/\text{K}$.

20. (previously presented) The opalescent glass ceramic according to claim 19, wherein Me(II)O is present in an amount of 2-3.5% by weight.

21. (previously presented) The opalescent glass ceramic according to claim 19, having a composition of:

Component	% by weight
SiO_2	58 - 60
Al_2O_3	14 - 15

P ₂ O ₅	2.3 - 2.6
Na ₂ O	9.5-10.5
K ₂ O	9 - 10
CaO	2.8 - 3
Tb ₂ O ₃	0 - 2
CeO ₂	0.3-0.4
SnO ₂	1.3 - 1.6

22. (previously presented) The opalescent glass ceramic according to claim 19, which is a dental material or an additive for a dental material.

23. (previously presented) The opalescent glass ceramic according to claim 19, wherein the thermal expansion coefficient (TEC) is in the range of 10.5 -12.0 x 10⁻⁶/K.

24. (previously presented) A method for producing an opalescent glass ceramic which is devoid of ZrO₂ and TiO₂, which has a thermal expansion coefficient (TEC) in the range of 9.0 - 13.5 x 10⁻⁶/K, and which comprises an Me(II)O component in an amount of less than 4% by weight and an Me(IV)O₂ component in an amount of 0.5 to 3% by weight, comprising the steps of:

mixing together the components:

Component	% by weight
SiO ₂	55 - 62
Al ₂ O ₃	13 - 17
B ₂ O ₃	0 - 2
P ₂ O ₅	1.5 - 3
Li ₂ O	0 - 2
Na ₂ O	7 - 12
K ₂ O	8 - 12
MgO	0 - 2
CaO	1 - 4
BaO	0 - 2
Tb ₂ O ₃	0 - 3
Me (IV) O ₂	0.5 - 3

wherein said Me(IV)O_2 consists essentially of 0-1% by weight CeO_2 and 0-2.5% by weight SnO_2 ,

- melting the mixture in a furnace;
- quenching the molten mass from the furnace in a water bath and drying to form a frit;
- grinding the frit in a mill;
- tempering the ground frit; and
- sifting the ground frit through a sieve.

25. (previously presented) The method according to claim 24, wherein the tempering of the frit comprises the steps of:

- stacking the ground frit on quartz-coated fire-clay plates,
- placing the fire-proof plates in a furnace heated to a temperature T with $850^\circ\text{C} \leq T \leq 1000^\circ\text{C}$, thereby fusing the ground frit,
- removing the plates from the furnace after a time t with $30 \text{ min} \leq t \leq 60 \text{ min}$, and
- quenching the fused frit in a water bath.

26. (previously presented) The method according to claim 24, wherein the components are mixed in a gyro mixer.

27. (previously presented) The method according to claim 24, wherein the mixture is melted in a gas-heated drip-feed crucible furnace.

28. (previously presented) The method according to claim 24, wherein the grinding step comprises filling the frit into a ball mill and grinding at about 10,000 revolutions per minute.

29. (previously presented) The method according to claim 24, wherein the ground frit is sifted through a sieve having a mesh size M in the range of $80 \text{ }\mu\text{m} \leq M \leq 120 \text{ }\mu\text{m}$.

30. (new) The method according to claim 25, wherein the ground frit is fused at a temperature of 870 to 970° C.

31. (new) The method according to claim 24, wherein the thermal expansion coefficient is set to $10.5 - 12.0 \times 10^{-6}/K$ by adjusting the K_2O content.

32. (new) The method according to claim 24, wherein the melting temperature of the opalescent glass ceramic is controlled to 870° C to 970° C by adjusting the amounts of B_2O_3 , Li_2O and Na_2O .